

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04R5/033 H04R5/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/021800 A1 (BJERRUM-NIESE CHRISTIAN ET AL) 21 February 2002 (2002-02-21) page 4, paragraph 62 – paragraph 63 page 5, paragraph 74 claims 13,14 figures 11,24	1-7,9,10
Y	-----	8
X	US 4 817 153 A (FERNANDEZ JORGE D) 28 March 1989 (1989-03-28) column 1, line 46 – line 60 column 3, line 34 – line 64 column 4, line 67 – column 5, line 16 claim 1; figures 2,4,5	1-3,10
Y	US 5 563 951 A (MINSKY MARGARET D R ET AL) 8 October 1996 (1996-10-08) abstract; figures 1,2 -----	8
	-/-	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

Date of mailing of the international search report

26 November 2004

07/12/2004

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 146 501 A (SPECTOR DONALD) 8 September 1992 (1992-09-08) column 2, line 50 - line 54; figures 6,8 column 4, line 36 - line 63 column 5, line 15 - line 26 column 6, line 43 - line 60 -----	6
A	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 09, 4 September 2002 (2002-09-04) & JP 2002 135887 A (NEC CORP), 10 May 2002 (2002-05-10) cited in the application abstract -----	1-10

Information on patent family members

International Application No
PCT/IB2004/051644

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 2002021800	A1	21-02-2002	DK	200000765 A		10-11-2001
			AU	5211501 A		20-11-2001
			CA	2406609 A1		15-11-2001
			CN	1428038 T		02-07-2003
			WO	0186923 A1		15-11-2001
			EP	1282974 A1		12-02-2003
			JP	2003533135 T		05-11-2003
			NO	20024963 A		18-12-2002
			US	2004028218 A1		12-02-2004
			US	2004052362 A1		18-03-2004
			US	2004052363 A1		18-03-2004
			US	2004052364 A1		18-03-2004
US 4817153	A	28-03-1989		NONE		
US 5563951	A	08-10-1996	AU	3240295 A		22-02-1996
			EP	0772952 A1		14-05-1997
			JP	10503340 T		24-03-1998
			WO	9603847 A1		08-02-1996
			US	5757929 A		26-05-1998
US 5146501	A	08-09-1992		NONE		
JP 2002135887	A	10-05-2002	JP	3514231 B2		31-03-2004